

POLYSTICHUM ACROSTICHOIDES (Michx.) Schott.	OSMUNDA REGALIS, var. SPECTABILIS (Willd.) Gray.
POLYSTICHUM BRAUNII (Spenner) Fée, var. PURSHII Fernald.	OSMUNDA CLAYTONIANA L.
CYSTOPTERIS BULBIFERA (L.) Bernh.	OSMUNDA CINNAMOMEA L.
CYSTOPTERIS FRAGILIS (L.) Bernh.	BOTRYCHIUM LANCEOLATUM (Gmel.) Angstroem.
WOODSIA ILVENSIS (L.) R. Br.	BOTRYCHIUM MATRICARIAEFOLIUM A. Br. ( <i>B. ramosum</i> (Roth) Aschers.)
WOODSIA ALPINA (Bolton) S. F. Gray.	BOTRYCHIUM TERNATUM, var. RUTAEFOLIUM (A. Br.) D. C. Eaton
WOODSIA GLABELLA R. Br.	BOTRYCHIUM VIRGINIANUM (L.) Sw.
ONOCLEA SENSIBILIS L.	
PTERETIS NODULOSA (Michx.) Nieuwl.	

BOSTON, MASS.

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## THE NAMES ASTER ERICOIDES AND A. MULTIFLORUS

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WHEN publishing<sup>1</sup> recently two new varietal names under *Aster multiflorus* Ait., I overlooked a paper by Mr. K. K. Mackenzie<sup>2</sup> in which he showed that the name *Aster ericoides* L., long universally used in another sense, should be taken up for *A. multiflorus*. The name *Aster ericoides* was based by Linnaeus on two references, Gronovius' "*Aster caule paniculato, pedunculis racemosis, pedicellis foliosis, foliis linearibus integerrimis,*" and Dillenius' "*Aster ericoides, dumosus.*" The specimens on which these names were founded were long ago identified by Dr. Gray<sup>3</sup> as *A. multiflorus* Ait. The specimen from the Upsala Garden labeled *ericoides* in the Linnaean Herbarium, which represents a garden state of the *A. ericoides* of authors, was not in the Linnaean Herbarium in 1753 (about which Dr. Gray was uncertain), and consequently does not figure in the identification of *A. ericoides* as originally described. The current misapplication of the name *A. ericoides* originated with Aiton<sup>4</sup> in 1789. Aiton's misinterpretation has been followed by nearly all subsequent authors, although Michaux (1803) and Schkuhr (1803), as cited by Gray in 1884, used this name for plants not more than varietally separable from the original *A. ericoides* L. Gray himself stated that the name

<sup>1</sup> RHODORA 30: 227-228. 1928.

<sup>2</sup> RHODORA 28: 65. 1926.

<sup>3</sup> Proc. Amer. Acad. 17: 165. 1882.

<sup>4</sup> Hort. Kew. 3: 202. 1789.

*A. ericoides* should have been continued by Solander<sup>1</sup> for the Dillenian and Gronovian plant, "unless he could ascertain that the specimen in the Upsal Garden was in the herbarium as early as the year 1753." Instead of making this needful correction, Gray chose to continue the usage established by Aiton, in which he has been followed by all American authors until the publication of Mr. Mackenzie's note.

In view of the fact that several varieties of *Aster multiflorus* have been described since Dr. Gray examined the plants forming the foundation of Linnaeus's description, it has seemed wise to obtain more definite information about certain specimens in European herbaria. Clayton 194, in the British Museum, the basis of Gronovius' "*Aster caule paniculato, pedunculis racemosis, pedicellis foliosis, foliis linearibus integerrimis*,"<sup>2</sup> has been examined by Mr. George Taylor, who informs me that the hairs on the upper part of the stem are appressed, but not closely so, and that the pubescence on the lower part varies considerably, some of the hairs being spreading. It is evident from his notes that the plant is to be placed under typical *A. multiflorus* and not under the variety which has wide-spreading pubescence throughout. Mr. G. Claridge Druce reports that the stem pubescence is appressed in the Dillenian specimen which is the basis of his "*Aster ericoides, dumosus*."<sup>3</sup> An excellent photograph of the type specimen of *Aster villosus* Michx. in the Michaux Herbarium, taken for me by Mr. A. Cintract with the permission of Prof. H. Lecomte, is available. The type consists of only the upper part of the plant, but the comparatively large and broad involucre, the conspicuous spreading pubescence of the stem, and the very narrowly linear stem leaves leave no room for doubt that the name is properly identified in Torrey and Gray's Flora and in Gray's Manual with that phase of "*ericoides*" which differs from the typical form of that species (as usually understood) only in the presence of copious pubescence. The two type sheets of *Aster multiflorus* var. *caeruleus* Benke, in the Field Museum of Natural History, have also been examined through the kindness of Mr. Paul C. Standley. In these the pubescence of stem and branches is ascending or subappressed; the rays, as noted by the collector, were blue with a suggestion of purple. I cannot separate them from the western plant described by Piper as *A. columbianus*, the rays of which were described as violet.

<sup>1</sup>As to the part taken by Solander and Dryander in the preparation of Aiton's "Hortus Kewensis" see J. Britten, Journ. Bot. 50: Suppl. 3. 1912.

<sup>2</sup>Gron. Fl. Virg. 100. 1739; ed. 2. 124. 1762.

<sup>3</sup>Hort. Elth. 40. pl. 36, f. 40. 1732.

The name *Aster ericoides* L. being necessarily transferred to the plant generally known as *A. multiflorus* Ait., it remains to find a name for the *A. ericoides* of our manuals and floras. The earliest specific name applied to any form of "*A. ericoides*" of authors is evidently *Aster villosus* Michx. (1803), a name unfortunately preoccupied by *A. villosus* Thunb. (1800). The latter name is referred to the synonymy of *Felicia angustifolia* in the Index Kewensis, evidently on the basis of De Candolle's placing of it in the synonymy of *Felicia angustifolia*  $\alpha$ . *hyssoipifolia* (Berg.) DC.<sup>1</sup> Nees' *Felicia angustifolia* (1832) was based on "*Aster angustifolius* Willd. Sp. pl. III. 3. p. 2017. n. 12. ex parte" (1803), a name which depends on *Aster angustifolius* Jacq. (1798). In Harvey's treatment of the Compositae in the Flora Capensis (3: 71, 73, 75. 1864) the genus *Felicia* is sunk in *Aster*, and *A. angustifolius* Jacq. and *A. hyssoipifolius* Berg. are treated as distinct, the name *A. villosus* Thunb. not being mentioned even in synonymy. Willdenow<sup>2</sup> retained *Aster villosus* Thunb. as a valid species of *Aster* and gave the new name *A. pilosus* to *A. villosus* of Michaux. Under the American Code Willdenow's name must be retained, and the same course would seem necessary under the International Rules, since, in view of the lack of agreement regarding the status of the genus *Felicia* and the uncertainty regarding the identity of *Aster villosus* Thunb., the latter name can scarcely be considered to be "universally regarded as non-valid."<sup>3</sup> The names to be used for the species which have been called *A. ericoides* and *A. multiflorus*, and their varieties, are the following:

ASTER ERICOIDES L. Sp. Pl. 2: 875. 1753. *Aster multiflorus* Ait. Hort. Kew. 3: 203. 1789. *Aster multiflorus*  $\beta$ . *stricticaulis* Torr. & Gray, Fl. N. Amer. 2: 125. 1841. *Aster multiflorus* var. *exiguus* Fernald, RHODORA 1: 187. 1899. *Aster exiguus* Rydb. Bull. Torrey Club 28: 505. 1901, as to name-bringing syn. only. *Aster stricticaulis* Rydb. Fl. Rocky Mount. 885, 1067. 1917.

This plant, the *Aster multiflorus* of practically all authors for more than a century, must be called *Aster ericoides* L.

A. ERICOIDES var. **prostratus** (Kuntze). *Aster multiflorus*  $\beta$  *prostratus* Kuntze, Rev. Gen. Pl. 1: 313. 1891. *Aster multiflorus* var. *pansus* Blake, RHODORA 30: 227. 1928.

<sup>1</sup> Prodr. 5: 220. 1836.

<sup>2</sup> Sp. Pl. 3: 2017, 2025. 1803.

<sup>3</sup> Under the modified interpretation of Art. 50 of the International Rules recently proposed by Briquet and by Sprague, it would be necessary in any case to reject the name *Aster villosus* Michx., since the earlier homonym of Thunberg was proposed as a new species.

Distinguished by its wide-spreading pubescence, that of the typical form being appressed or merely ascending. Kuntze's *A. multiflorus*  $\beta$  *prostratus* was defined in the following words: "caulis prostratus ramis erectis," being contrasted with his  $\alpha$  *normalis*, of which he says "caulis erectus." Examination of the type (Nebraska, Sept. 1874, *Kuntze*), kindly lent by Dr. J. K. Small from the herbarium of the New York Botanical Garden, shows that it is the form with spreading pubescence. Dr. J. K. Small writes me that no named material of  $\alpha$  *normalis* is in Kuntze's herbarium. The habitual differences on which Kuntze relied in separating his two varieties are obviously of no importance. *Aster hebecladus* DC. Prodr. 5: 242. 1836, and *A. scoparius* DC. (not Nees, 1818), l. c., are very closely related forms from the arid southwestern United States, which may require reductions to synonymy under var. *prostratus*.

A. ERICOIDES f. **caeruleus** (Benke). *Aster columbianus* Piper, Contr. U. S. Nat. Herb. 16: 210. 1913. *Aster multiflorus* var. *caeruleus* Benke, RHODORA 30: 78. 1928. *Aster multiflorus* var. *columbianus* Blake, RHODORA 30: 227. 1928.

This plant, distinguished from the typical form of *A. ericoides* only by the blue or violet color of its rays, is better treated as a forma than a variety.

ASTER PILOSUS Willd. Sp. Pl. 3: 2025. 1803. *Aster villosus* Michx. Fl. Bor. Amer. 2: 113. 1803 (Not *A. villosus* Thunb. 1800). *Aster ericoides*  $\beta$ . *villosus* Torr. & Gray, Fl. N. Amer. 2: 124. 1841. *Aster ericoides pilosus* Porter, Mem. Torrey Club 5: 323. 1894.

This is *Aster ericoides* var. *villosus* of recent authors.

A. PILOSUS var. **platyphyllus** (Torr. & Gray). *Aster ericoides*  $\gamma$ . *platyphyllus* Torr. & Gray, Fl. N. Amer. 2: 124. 1841.

A. PILOSUS var. **demotus**, var. nov. *Aster ericoides* Ait. Hort. Kew. 3: 203. 1789, not L. (err. ident.). ?*Aster glabellus* Nees, Syn. Aster. 31. 1818.—Plant glabrous or very sparsely pilose; leaves narrow; heads numerous, paniced, the panicle branches more or less racemiform. TYPE no. 356711, U. S. National Herbarium, collected near Virginia Beach, Princess Anne County, Virginia, 1 Oct. 1898, by T. H. Kearney (no. 2059).—Maine and Ontario to North Carolina and Missouri, common.

This is *A. ericoides* of practically all authors since Aiton, except Michaux (Fl. Bor. Amer. 2: 113. 1803), and Schkuhr (Bot. Handb. 105. pl. 245. 1803), both of whom used the name *A. ericoides* in essentially its Linnaean sense—that is, for some form of *A. multiflorus* Ait. Although *Aster glabellus* Nees (a name wrongly attributed by

its author to Michaux) is referred by Gray to the synonymy of *A. ericoides*, the description is not entirely convincing, and the name is best passed over. Specimens of the present form with stems absolutely glabrous are difficult to find. The name *pilosus* should be restricted to those plants in which the stem is conspicuously hairy, and the subglabrous plants referred to var. *demotus*.

*A. PILOSUS* var. **pringlei** (Gray). *Aster ericoides* var. *pringlei* Gray, Syn. Fl. 1<sup>2</sup>: 184. 1884. *Aster pringlei* (Gray, Proc. Amer. Acad. 16: 99. 1880, nomen nudum); Britton in Britton & Brown, Ill. Fl. 3: 379. 1898.

*A. PILOSUS* var. **reevesii** (Gray). *Aster ericoides* var. *reevesii* Gray, Syn. Fl. 1<sup>2</sup>: 184. 1884. *Aster reevesii* Hort.; Gray, l. c. as synonym. 1884.

An ambiguous form. *Aster priceae* Britton, Man. 960. 1901, and *A. kentuckiensis* Britton, l. c., are closely related and when better known may prove to be synonymous with this variety or recognizable as independent varieties.

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## CUBELIUM CONCOLOR

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So little has been written concerning *Cubelium concolor* (Forst.) Raf. that it seems worth while to note some observations in relation to it.

The type was described as having stems hispid throughout, was in cultivation and of North American origin. Such hispid plants occur here and there nearly throughout the range of the species, but usually are glabrous below and in varying degree to the summit. The hairs are of several kinds, all segmented. Those strictly hispid sometimes occur alone and rather sparsely. Commonly these are more or less obscured by mixture with glistening white, flattened, irregular hairs which, when abundant, give a coarse, somewhat woolly appearance to the stem. Among the latter may be some spiral hairs and some with the planes of the flattened segments at diametrical right angles, the terminal one ensiform.

There is every degree of lesser hairiness to that in which it is reduced to narrow lines toward the summit of the stem, a scant pubescence, or